

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

1

Q

A

Complete if Known

Application Number	09/519,959
Filing Date	March 7, 2000
First Named Inventor	Nancy Carrasco
Group Art Unit	1642
Examiner Name	Stephen L. Rawlings, Ph.D.
Attorney Docket Number	96700/488

U.S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

Examiner
Signature

J. Randrup

Date
Considered

4/17/01

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.**



Please type a plus sign (+) inside this box → **+**

PTO/SB/08B (10-96)
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO			Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Application Number	09/519,959
			Filing Date	March 7, 2000
			First Named Inventor	Nancy Carrasco
			Group Art Unit	1642
			Examiner Name	Stephen L. Rawlings, Ph.D.
			Attorney Docket Number	96700/488
Sheet	2	of	4	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
SR	1	Cancroft and Goldsmith, (99m)Tc-pertechnetate scintigraphy as an aid in the diagnosis of breast masses. Radiology, 106(2):441-44, Feb. 1973.	
SR	2	Carrasco, N., Iodide transport in the thyroid gland. Biochim. Biophys. Acta., 1154(1):65-82, Jun. 1993.	
SR	3	Caturegli et al., Hypothyroidism in transgenic mice expressing IFN-gamma in the thyroid. Proc. Natl. Acad. Sci. USA, 97(4):1719-24, Feb. 15, 2000.	
SR	4	Dai et al., Cloning and characterization of the thyroid iodide transporter. Nature, 379:458-60, Feb. 1, 1996.	
SR	5	Deleu et al., Characterization of autonomous thyroid adenoma: metabolism, gene expression, and pathology. Thyroid, 10(2):131-40, Feb. 2000.	
SR	6	Eng et al., Escape from the acute Wolff-Chaikoff effect is associated with a decrease in thyroid sodium/iodide symporter messenger ribonucleic acid and protein. Endocrinology, 140(8):3404-10, Aug. 1999.	
SR	7	Eskandari et al., Thyroid Na ⁺ /I ⁻ symporter: mechanism, stoichiometry, and specificity. J. Biol. Chem., 272(43):27,230-238, Oct. 24, 1997.	
SR	8	Eskin, B.A., Iodine and mammary cancer. Advances in Experimental Medicine and Biology, 91:293-304, 1977.	
SR	9	Eskin et al., Human breast uptake of radioactive iodine. Obstetrics and Gynecology, 44(3):398-402, Sept. 1974.	
SR	10	Filetti et al., Sodium/iodide symporter: a key transport system in thyroid cancer cell metabolism. Eur. J. Endocrinol., 141(5):443-57, Nov. 1999.	
SR	11	Jhiang et al., An immunohistochemical study of Na ⁺ /I ⁻ symporter in human thyroid tissues and salivary gland tissues. Endocrinology, 139(10):4416-19, Oct. 1998.	

Examiner Signature	<i>S. Rawlings</i>	Date Considered	4/17/01
--------------------	--------------------	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box → ☒

PTO/SB/08B (10-96)
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet **3** of **4**

Complete if Known

Application Number	09/519,959
Filing Date	March 7, 2000
First Named Inventor	Nancy Carrasco
Group Art Unit	1642
Examiner Name	Stephen L. Rawlings, Ph.D.
Attorney Docket Number	96700/488

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
SR	12	Kaminsky et al., Na(+)-I(-) symport activity is present in membrane vesicles from thyrotropin-deprived non-I(-)-transporting cultured thyroid cells. Proc. Natl. Acad. Sci. USA, 91:3789-93, Apr. 1994.
SR	13	Kaminsky et al., The Na+/I- symporter of the thyroid gland. In Molecular Biology and Function of Carrier Proteins (New York: The Rockefeller University Press, 1993), chap. 20, 251-62.
SR	14	Kaminsky et al., Inhibition of the Na+/I- symporter by harmaline and 3-amino-1-methyl-5H-pyrido(4,3-b)indole acetate in thyroid cells and membrane vesicles. Eur. J. Biochem., 200(1):203-07, Aug. 1991.
SR	15	Kilbane et al., Tissue iodine content and serum-mediated (125)I uptake-blocking activity in breast cancer. JCEM, 85(3):1-6, 2000.
SR	16	Levy et al., N-linked glycosylation of the thyroid Na+/I- symporter (NIS). J. Biol. Chem., 273(35):22,657-663, Aug. 28, 1998.
SR	17	Levy et al., Identification of a structural requirement for thyroid Na+/I- symporter (NIS) function from analysis of a mutation that causes human congenital hypothyroidism. FEBS Lett., 429(1):36-40, Jun. 1998.
SR	18	Levy et al., The Na+/I- symporter (NIS): recent advances. J. Bioenerg. Biomembr., 30(2):195-206, Apr. 1998.
SR	19	Levy et al., Characterization of the thyroid Na+/I- symporter with an anti-COOH terminus antibody. Proc. Natl. Acad. Sci. USA, 94:5568-73, May 1997.
SR	20	Lyttle et al., Peroxidase activity and iodide uptake in hormone-responsive and hormone-independent GR mouse mammary tumors. J. Natl. Cancer Inst., 62(4):1031-34, Apr. 1979.
SR	21	Ohno et al., The paired-domain transcription factor Pax8 binds to the upstream enhancer of the rat sodium/iodide symporter gene and participates in both thyroid-specific and cyclic-AMP-dependent transcription. Mol. Cell. Biol., 19(3):2051-60, Mar. 1999.
SR	22	Saito et al., Increased expression of the sodium/iodide symporter in papillary thyroid carcinomas. J. Clin. Invest., 101(7):1296-1300, Apr. 1998.

Examiner Signature	<i>S. L. Rawlings</i>	Date Considered	4/17/01
--------------------	-----------------------	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

RECEIVED

MAR 22 2001



Please type a plus sign (+) inside this box → ☒

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

PTO/SB/08B (10-96)

Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet **4** of **4**

Complete if Known

Application Number	09/519,959
Filing Date	March 7, 2000
First Named Inventor	Nancy Carrasco
Group Art Unit	1642
Examiner Name	Stephen L. Rawlings, Ph.D.
Attorney Docket Number	96700/488

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
SR	23	Shimura et al., Iodide uptake and experimental (131I) therapy in transplanted undifferentiated thyroid cancer cells expressing the Na ⁺ /I ⁻ symporter gene. Endocrinology, 138(10):4493-96, Oct. 1997.	
SR	24	Smanik et al., Expression, exon-intron organization, and chromosome mapping of the human sodium iodide symporter. Endocrinology, 138(8):3555-58, Aug. 1997.	
SR	25	Spitzweg et al., Prostate-specific antigen (PSA) promoter-driven androgen-inducible expression of sodium iodide symporter in prostate cancer cell lines. Cancer Research, 59:2136-41, May 1, 1999.	
SR	26	Spitzweg et al., Analysis of human sodium iodide symporter gene expression in extrathyroidal tissues and cloning of its complementary deoxyribonucleic acids from salivary gland, mammary gland, and gastric mucosa. JCEM, 83(5):1746-51, May 1998.	
SR	27	Thorpe, S.M., Increased uptake of iodide by hormone-responsive compared to hormone-independent mammary tumors in GR mice. Int. J. Cancer, 18:345-50, Sept. 1976.	
SR	28	Thorpe and Briand, The ability to concentrate iodide as a marker of hormone dependence in GR mouse mammary tumors. Int. J. Cancer, 34(1):127-31, July 1984.	
SR	29	Uyttersprot et al., Moderate doses of iodide in vivo inhibit cell proliferation and the expression of thyroperoxidase and Na ⁺ /I ⁻ symporter mRNAs in dog thyroid. Mol. Cell. Endocrinol., 131(2):195-203, Aug. 1997.	
SR	30	Villijn and Carrasco, Expression of the thyroid sodium/iodide symporter in Xenopus laevis oocytes. J. Biol. Chem., 264(20):11,901-903, Jul. 1989.	

Examiner
Signature

S. Rawlings

Date
Considered

4/17/01

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

TECH CENTER 1600/2900

MAR 22 2001

RECEIVED